

JANUARY  
1951

#### BUFFALO — THE SOGES CONVENTION CITY

The cluster of buildings in center are General Mills' property. At far left is Dakota Elevator (1 million bus.). In front of it is General Mills Elevator ( $4\frac{3}{4}$  million bus.) Both are under supervision of C. H. (Jersey) Halsted. Center rear shows Cargill Eastern Elevator, acquired by General Mills and recently torn down. On extreme right is Spencer Kellogg Elevator ( $1\frac{1}{4}$  million bus.), Wm. MacKay, Superintendent.

# Grain

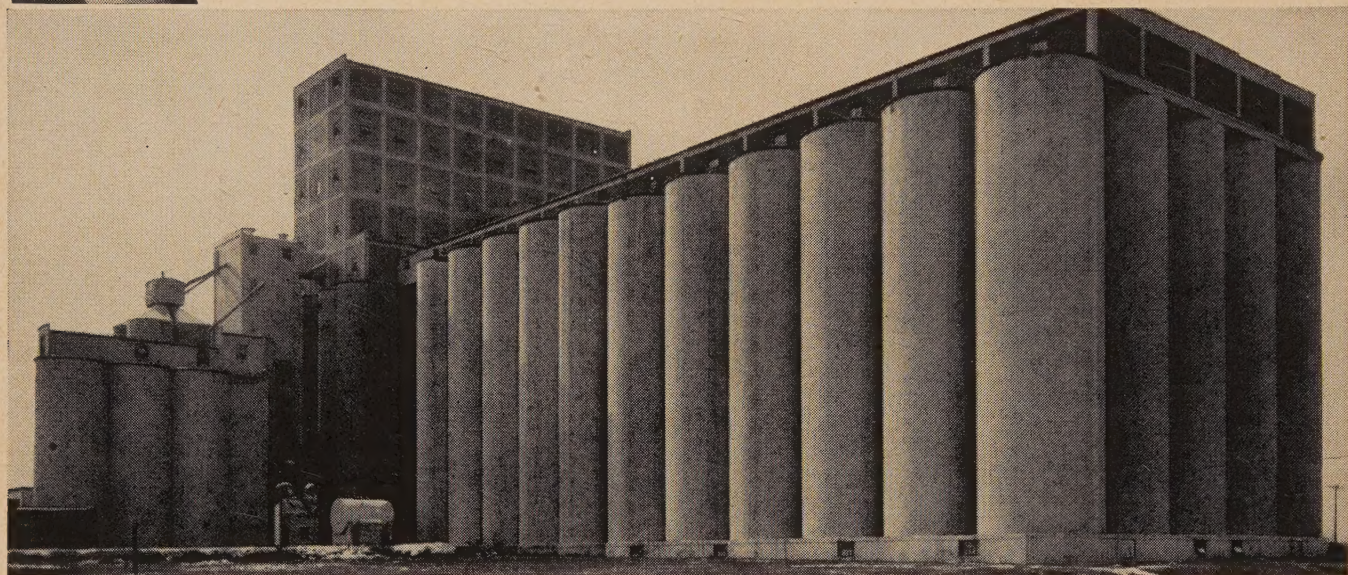
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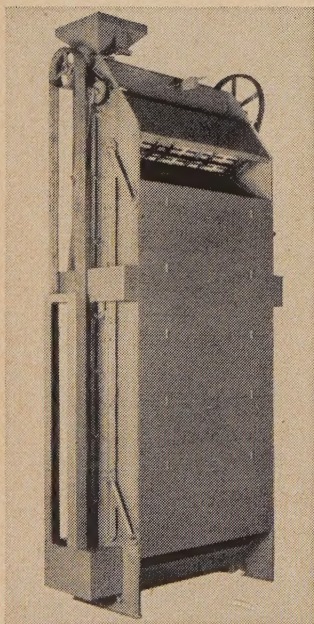


# "Archer-Daniels-Midland uses SUPERIOR equipment—here's why"

Says H. K. SACRE, Superintendent of the ADM Soo Elevator, Minneapolis, Minn.

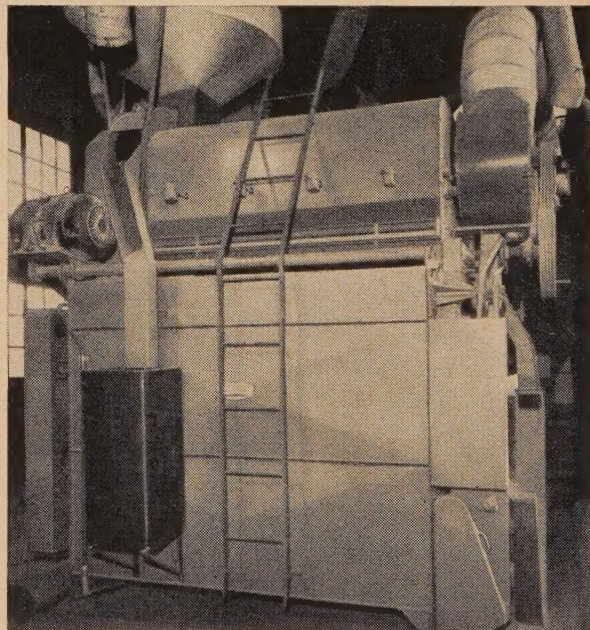


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← **SUPER ACCURACY** is built into every Superior machine. Ten of these Vertical Width Graders are on the job in the ADM Soo Elevator. Their slotted, stationary screens provide micro-accuracy in grading oats, rye, wheat, barley or durum. Grain moves over the screens entirely by gravity—that means fewer moving parts to get out of adjustment.

**FLEXIBILITY** is another famous → Superior feature. Superior Cylinder Machines (the Soo Elevator has two of them) can be equipped to clean a wide variety of cereal grains without the necessity of changing indent cylinders... a real time-saver in big-volume plants with high accuracy standards. Large diameter (23-inch) cylinders provide maximum flexibility and accuracy.



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# *What We Have Learned About* **DUST EXPLOSIONS**

By **HYLTON R. BROWN**

*Senior Engineer, U. S. Bureau of Mines*

**A**LL DUST EXPLOSIONS do not occur in industrial plants. In the Pacific Northwest a number of years ago there seemed to be an epidemic of dust explosions in and around grain-threshing machines. The pressure developed from a dust ignition inside of a machine frequently wrecked or damaged the equipment; in many instances, however, the ignition occurred on the outside without any confinement that would cause pressure to be built up, and the result would be a flash fire or what is sometimes referred to as an unconfined explosion. Such flash fires often ignited nearby grain or straw, spread to standing grain in the field, and involved other property, resulting in heavy monetary loss.

Another type of flash fire sometimes referred to as an explosion occurs in cotton gins or establishments where quantities of fine, light, cotton fibers may be suspended in the atmosphere. When the concentration of fibers in the atmosphere reaches a critical value and a source of ignition is introduced, the reaction is quite similar to a dust explosion because the combustion quickly involves surrounding particles (fibers), and flame propagation through the cloud becomes so rapid that pressure waves are produced. During some of the years for which insurance records are available on this type of risk, the annual monetary loss caused by flash fires in cotton gins exceeded \$2,000,000.

Ignitions of sulphur-dust clouds have been reported in the open air around docks where ships containing bulk cargoes of sulphur were being unloaded. As a rule, this type of flash fire or dust explosion in the open air causes little or no property damage, but may cause painful burns to persons who are enveloped by the flames. In a few instances the flames communicated with sulphur-dust clouds in the holds or spaces below deck on the ships, and the resulting pressure of the confined or partly confined explosion buckled steel plates in the deck or bulkheads.

## **Rice Driers**

In recent years the increased use of combines in harvesting rice has introduced a new hazard in some of

the Southern States. When combines are used, it is necessary to dry the freshly harvested crop; therefore driers have been erected at many points in the rice-growing regions. The driers are the same as those used at some grain elevators. Operators

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**D**URING recent years special emphasis has been placed upon the enormous and ever-increasing loss of life and property caused by fire. Closely related and forming a part of these losses is the toll taken by dust explosions, and fires resulting therefrom, in the dusty industries of our country. It is quite natural to associate the dust-explosion hazard with some local industry where an explosion has occurred in the past or some type of plant or factory in which an explosion causes loss of life or property damage large enough to obtain newspaper publicity or otherwise attract nation-wide attention.

At one time, only carbonaceous dusts, such as flour, sugar, starch, wood dust and coal dust, were considered capable of forming explosive mixtures with air, and many felt that it was necessary to have some gas present with the dust and air before ignition and flame propagation could occur. Scientists have demonstrated that dust and air alone can form explosive mixtures, and not only carbonaceous dusts but metal powders and many of the materials used in the plastic industry in powdered form can produce disastrous explosions wherever the dusts are dispersed or can be thrown into suspension in air within certain limits of explosive concentrations.

The best estimate available indicates that there are about 28,000 industrial plants in this country that produce or handle explosive dusts or employ some process that involves a dust-explosion hazard. The records show that, in the latest 10-year period for which complete figures are available (1940-49 inclusive), dust explosions killed 119 persons and caused property damage of over \$38,000,000.

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of driers, who are familiar with the dust-explosion hazards generally associated with grain drying, have been interested in determining whether similar hazards exist during the drying of rice.

A number of samples of rice dust

have been submitted for laboratory testing. Although considerable variation was noted in the data obtained with the different samples, a representative report indicates that ignition of clouds of minus 200-mesh rice dust will occur at 500°C. The minimum explosive concentration is approximately 0.08 ounce per cubic foot of air, but for some varieties of rice dust this concentration may be much higher.

The minimum energy required for the ignition of the dust cloud is about 0.1 joule, but in one instance it was as high as 0.8 joule. (A joule is the energy represented by the flow of 1 ampere through a resistance of 1 ohm for 1 second, or the equivalent of 0.00095 B.t.u.).

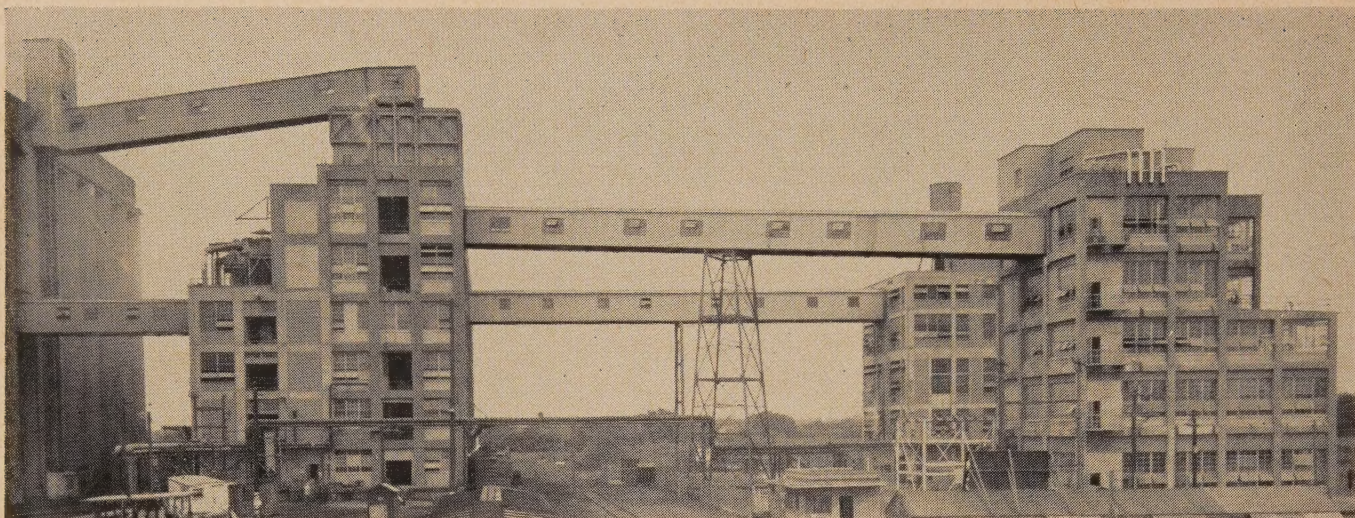
In tests with several rice-dust samples, the maximum pressures obtained from explosions of concentrations of 0.5 ounce of rice dust per cubic foot of air ranged from 47 to 55 pounds per square inch. The maximum pressure is somewhat higher than that obtained with certain types of wheat and other grain dust. One of the more important indications of the severity of explosibility is the maximum rate of pressure rise following the dust ignition.

In this respect there is wide variation in the results obtained with different samples of rice dust. At the same concentration, 0.5 ounce per cubic foot, the maximum rate of pressure rise ranged from 540 to 1020 lbs. per square inch per second. When the concentration of the latter samples was increased to 1 oz. per cu. ft., the readings rose still higher to 1,170 lbs. per sq. in. per sec. Although these figures are not as high as those obtained in tests with some other types of dust, they show that rice dust is explosive; therefore all possible precautions should be taken to prevent the formation of rice-dust clouds and to eliminate sources of ignition where fine particles may be produced or handled.

## **Major Dust Explosions**

Some of the major dust explosions in this country, which attracted nation-wide attention, caused extensive loss of life and property damage amounting to millions of dollars.





In the foreground are the new buildings of the A. E. Staley Mfg. Co.'s latest soybean extraction plant at Decatur, Ill. The new units are declared to make this the world's largest plant of its kind with a total capacity of over 2,000 tons daily. In background are buildings of the extraction plant completed in 1945 similar in appearance and construction to the new plant. At left is part of the big soybean elevator. Next to it is preparation building and on the right is extraction building. All buildings are connected by long conveyor galleries.

Probably the earliest dust explosion of major importance was the one that wrecked the Washburn "A" Mill in Minneapolis on May 2, 1878. This blast leveled the huge stone building and damaged adjoining and nearby structures. Eighteen were killed in this explosion; and the property loss of \$800,000, considering the purchasing power of the dollar then and now, was probably the largest dust-explosion loss experienced by the flour-milling industry.

Many serious dust explosions have occurred in other types of industry since the disaster at Minneapolis. In 1913 a feed-mill explosion in Buffalo, N. Y., killed 33 persons and injured 80 others. At Cedar Rapids an explosion in a starch factory in 1919 resulted in the death of 43 persons, injury to 30 others, and a total property loss of over \$3,000,000. A few years later the grain industry suffered one of its heaviest losses when the Northwestern Elevator in South Chicago was wrecked by a dust explosion that caused a property loss of about \$3,750,000. In 1924 another explosion in a starch factory at Pekin, Ill., killed 42 and injured 22.

The grain-elevator explosion at Port Arthur, Ont., on August 7, 1945, in which 22 persons were killed and 30 injured, and the explosion at a candy plant in Chicago on Sept. 7, 1948, which killed 15 and caused property damage of about \$2,000,000, are more recent examples of major explosions that attract national attention and for a time at least create widespread interest in programs designed to reduce or eliminate the hazard.

### Unusual Dust Explosions

Persons not directly concerned with recording dust-explosion losses probably associate the hazard only with large industrial operations and give little thought to the numerous small

explosions that receive little publicity, but nevertheless, contribute substantially to the total loss figures. It is likewise true that the average individual is familiar with the many ordinary conditions and some unusual circumstances under which dust ignitions may occur.

It may be of interest to review a few of the unusual occurrences; or, if we agree with those who consider that any dust explosion is an unusual occurrence, we can refer to these as most unusual. To those who use aluminum or magnesium cooking utensils and see these metals exposed to open flames without any indication of combustion, it must seem almost unbelievable that these and other metals in powdered form can produce explosive mixtures with air. Nevertheless, it is true that aluminum, magnesium, antimony, iron, tin, titanium, zirconium, and other metals in powdered form present some of our most serious explosion hazards, and explosions of such metal powders have occurred under some very unusual circumstances.

Six girls were killed and four others seriously burned when an explosion of aluminum dust occurred at the bench where they were putting a "satin finish" on aluminum lipstick containers by holding the small pieces against a rapidly revolving wire brush. The dust created by this operation was drawn away from the polishers by suction, but an ignition in the fan or duct system flashed back to where the girls were working.

In another plant a workman was seriously burned when he attempted to sharpen a steel chisel on a wheel that had been used for grinding magnesium parts. The sparks ignited the magnesium dust around the machine.

Not all of the unusual explosions occur in metal plants. A workman in a sulphur plant attempted to extinguish a small fire in the powdered

material by beating it with his cap. The dust cloud thus created ignited, and the flash caused the man to fall or jump to his death from the structure on which he was standing.

Explosions that may be referred to as unusual have occurred in cork factories and woodworking plants when firemen, called to extinguish fires, have turned heavy hose streams into piles of dust. Many firemen have been burned when dust clouds so created were ignited by surrounding flames.

A dust explosion occurred in a Washington apartment house while one of the apartments was being refinished and a workman was using a sanding machine on the hardwood floor. After the dust-collector bag was filled with wood and varnish dust, the operator took it out into the hall and emptied it in the incinerator chute. As the dust settled in the chute it formed an explosive mixture with air, was ignited, and the pressure from the explosion blew open the doors of the chute on different floors. The release of pressure, flame, and smoke prevented any structural damage to the building, but the refinishing operations were more expensive than originally planned.

### Research and Laboratory Tests

In investigating some of the early explosions, it was often difficult to explain how dust that was ignited in laboratory apparatus and produced explosion pressures of only 10 or 12 lbs. per sq. in. could cause such extensive destruction of steel-frame and reinforced-concrete structures. For instance, one grain-elevator explosion lifted from its foundation a large block of reinforced-concrete tanks filled with grain and estimated to weigh 100,000 tons.

The investigators determined that a force of over 70 lbs. per square inch would be required to cause such



damage. This exceeded the maximum pressure that could be expected from ignitions of grain dust, according to the results of laboratory tests available at that time. It was common practice to assume that in such instances gas from some source had combined with the dust to produce the higher pressure, but recent developments and improvements in laboratory testing methods have apparently given us the correct answer to this problem.

Like gasoline in a high-compression engine, dust and air mixtures, when compressed, apparently can produce much higher pressures than those recorded in early laboratory tests.

To illustrate some of the results of improved laboratory testing methods, the pressure readings obtained with coal dust by different methods will be cited. In the book "Dust Explosions," by Price and Brown, published in 1922, a table giving pressure readings obtained with different dusts shows that coal-dust explosions produced 10.1 lbs. per sq. in.

In 1935 a report on the explosibility of carbonaceous dusts by P. W. Edwards and L. R. Leinbach shows that coal dust tested by an improved method produced an explosion pressure of 42 lbs. per sq. in., with a maximum rate of pressure rise of 588 lbs. per sq. in. per sec.

Some time ago, in tests made in Bureau of Mines laboratories by Dr. Irving Hartmann, coal-dust explosions produced pressures of 87 lbs. and over with a maximum rate of pressure rise of 4,000 lbs. per sq. in. per sec.

Still further improvements have been made to obtain better dust dispersion in laboratory apparatus; and, with higher air compression referred to above, coal-dust explosions have produced pressures of 120 lbs. per sq. in. with a maximum rate of pressure rise of 8,200 lbs. per sq. in. per sec. It is no longer necessary to seek contributory causes to explain the destruction wrought by industrial dust explosions.

### Prevention and Protection

The two known ways to control dust-explosion hazards are: (1) Prevention, which means preventing the formation of dust clouds, elimination of possible sources of ignition, or control of the atmosphere in which the dust may be suspended; and (2) protection, which means segregation of hazardous operations into small units where explosions, if they occur, will be mild and relatively harmless, or venting to release explosion pressure before it becomes high enough to cause serious damage.

Dust collection and removal are

probably the most effective means of preventing dust explosions. Laboratory tests have provided information on the lower explosive limits for hundreds of different dusts. With such information, engineers ordinarily can design suction hoods, fans, and forced-ventilation systems to insure the removal of dust from its point of origin before it can disperse into the atmosphere and form explosive mixtures with air.

### Effective Methods

Elimination of sources of ignition is a widely used preventive but is less effective than the dust-control method. Dustproof electrical equipment has been designed for use where dust clouds may be present to reduce the possibility of ignition by electrical sparks or arcs. Safe types of heating appliances have been designed to eliminate the possibility of dust ignitions on heated surfaces.

Methods have been developed for at least partial control of static electricity. Smoking in hazardous areas can be prohibited, but strict enforcement of such regulations is sometimes difficult. After all precautions are taken, there remain the hazards of dust ignition by hot bearings, friction of belts or moving parts of machinery, and metallic sparks caused by foreign materials entering grinding

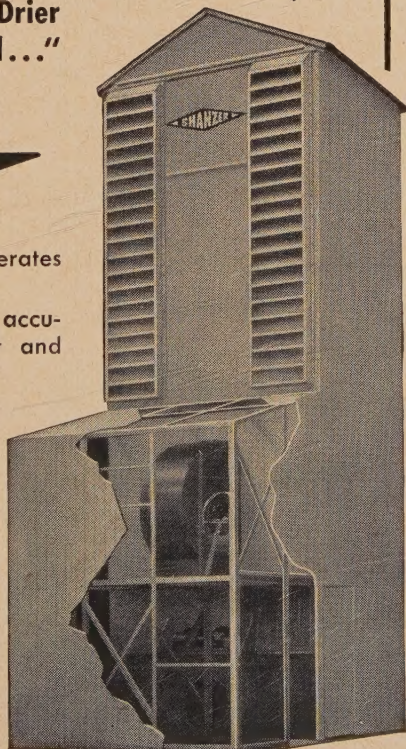
to quote Gilbert Kessler:

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**and "We have found the Economy Drier to be everything you have claimed . . ."**

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GILBERT M. KESSLER  
**TYRONE MILLING COMPANY**  
TYRONE, PENNSYLVANIA  
Golden Eagle Flours • Ty-Co Feeds  
September 20, 1950

H. M. Shanzer Co.  
85 Bluxome Street  
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Gentlemen:

We are pleased to report that we have just completed another very successful wheat drying season with the Shanzer Economy Grain Drier, which we installed during the spring of 1949. This machine has developed into a very profitable part of our plant investment.

During the 1949 season we handled 50,000 bushels of wheat, and 40,000 bushels of corn, and now in 1950, we have handled 40,000 of wheat. This is an exceptionally good record in our area, where high moisture grain requires as much as 10% reduction by the drier before we can ship or store it.

We have found the Economy Drier to be everything you have claimed for it, and to be well built and rugged in every respect, as well as extremely simple to operate. It has performed satisfactorily, and the field service you rendered us has been all that has been required.

We would gladly recommend the Shanzer Economy Drier to any country elevator having medium capacity drier requirements.

Very truly yours,

TYRONE MILLING CO.

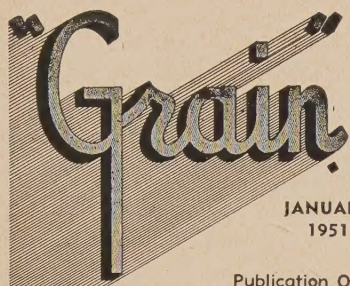
*Gilbert M. Kessler*

Write today for complete information

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| Shanzer Co., H. M. ....             | 7          |
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| Weller Co., B. J. ....              | 13         |
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machinery and the impact of metal objects or tools during repair or maintenance operations.

Another source of ignition that caused a number of explosions recently is the use of cutting and welding equipment. Control of this hazard rests almost entirely with the plant manager or supervisor. When workmen from outside the plant are called in for cutting or welding operations, they usually are unfamiliar with the explosion hazards in the area in which they are to work.

In such instances it is the responsibility of the plant operator to see that all dust-producing equipment is shut down and all dust accumulations within the working area are removed before this extremely hazardous source of ignition is introduced. It is desirable to prohibit the use of such equipment within any plant where dust-explosion hazards exist except in cases of extreme necessity and then only after all precautions have been taken to make the operation safe.

The use of controlled atmospheres to prevent dust explosions is becoming more general because it is realized that there are many places where the dusty material is the product being manufactured or processed and it cannot be collected and removed as a waste product.

Scientists have proved that, ordinarily, dust cannot ignite or explode in atmospheres containing too little oxygen to support combustion, and laboratory tests have supplied data on the oxygen reduction necessary to prevent explosions of many different types of dust.

For example, sulphur usually can be ground under normal operating conditions, without danger of dust ignition, by reducing the oxygen content within the machine from the 21% normally present in air to about 11%. This reduction can be accomplished by introducing carbon dioxide, nitrogen, helium, or other so-called inert gases. It is evident, of course, that this method of preventing dust explosions can be used only in closed systems. It is not feasible to reduce the percentage of oxygen in working areas or enclosures that employes must enter to perform their duties.

Protection against dust explosions is one of the most promising fields of research designed to reduce industrial-plant losses. The destruction of large buildings in some of the disastrous explosions in the past has been due to secondary explosions started by ignition of huge dust clouds formed when the initial blast dislodged dust accumulations. Like most fires, the explosions were small at first, and control in the early stages would have prevented the major part of the losses.

Cleanliness and good housekeeping are the first steps in providing pro-

tection against explosion, but segregation of hazardous operations to prevent dust dissemination throughout the plant and propagation of flame beyond the unit enclosure is becoming increasingly important.

It is seldom possible to control the pressure of an explosion within any plant unit, room, or enclosure having ordinary walls without providing vents to the outside to release the pressure before it causes structural damage. Here again, tests in laboratory equipment and explosion galleries have provided the data on which engineering designs can be based to provide the required release of pressure.

Certain factors govern the design of vents, such as the ratio of the area of the opening to the volume of the space to be vented and the location of the vent or vents with respect to the shape of the space to be vented.

The most effective vents for releasing dust-explosion pressure are unrestricted openings to the outside. If ducts are necessary to extend the vent from a room or enclosure to the outside of the building, the cross-sectional area and length of the duct are factors that influence the effectiveness of this form of protection.

The design and installation of satisfactory vents are specialized jobs and should be entrusted to someone familiar with the factors involved, such as: (1) The relative flammability or explosibility of the dust, (2) the maximum pressure and rate of pressure rise produced following ignition, (3) the venting area required, and (4) the most effective arrangement, location, and distribution of vents that can be provided under existing conditions.

In most instances it is impossible to provide unrestricted vents on processing equipment; consequently seals, diaphragms, or covers designed to rupture or blow off quickly must be provided for the vent openings. The selection of proper diaphragm material is also a job that calls for experience or familiarity with the tests that have been made on this phase of the subject. — *From an address at the Regional Conference, National Fire Protection Assn., Dallas, Texas on Nov. 28, 1950.*

## OVERTIME CAN BE ENFORCED

An important administrative ruling was recently made by NLRB's general council to the effect that an employer may be permitted to discipline employes who refuse to work overtime. The case in question involved some employes who were operating under a no-strike contract. When asked to work overtime they declined and thereupon engaged in an illegal strike. The employer withheld seniority from the striking employes and was upheld in the ruling.



# Extinguishing and Control of Small Grain Fires

By CHARLES E. HARBIN  
Mgr., Underwriters Grain Assn., Chicago

RECENT fires in grain elevators which have caused total destruction, as usual, have had a small beginning, but failure to handle properly this small fire in its early stages has caused the fire to spread and total destruction followed.

Reports by competent adjustors and fire prevention engineers on this subject have stated "bungling" on the part of the elevator crew in handling the fire, while small, plus an almost complete lack of knowledge of handling the first aid fire fighting equipment provided for this purpose, was the cause of the fire getting out of control.

## Cause for Alarm

The above mentioned, plus the possibility of sabotage, during these trying times, gives cause for alarm and brings to mind these questions:

(1) How well maintained is your first aid fire fighting equipment? This equipment includes automatic sprinklers, fire pumps, standpipe and hose, alarm systems, water supply, fire roads leading to plant, hydrants near plant, Fire Department connection, water barrels and pails, also all types of fire extinguishers.

(2) Are your men *all* familiar with the equipment provided for fire fighting in your plant? Do they know how to properly report a fire without delay? Do they know the basic rules for fighting fires? Do they know the proper method of handling fires in dust laden material or in dusty locations? Do they know the proper type of extinguishers to use for various fires, such as rubbish, oil, electrical fires, etc.? Do they know the locations of extinguishers and control valves of water supply?

Above are but a few of the vital questions which should be answered truthfully in your effort to keep the plant reasonably safe from fire and explosion. We are positive that with the constant need of hiring green help throughout all plants, you are naturally going to find many of your men have had no training or possess no knowledge of fire fighting equipment at all, and should have proper instruction in the use of all extinguishers and other equipment at the earliest possible convenient date.

Fire Departments are eager to give this instruction, knowing that a small fire properly handled by the elevator crew, is one they may never need to fight later. We request that elevator men ask their fire chief to

provide a speaker and demonstrator for each plant.

## Proper Handling Needs

### "Know How"

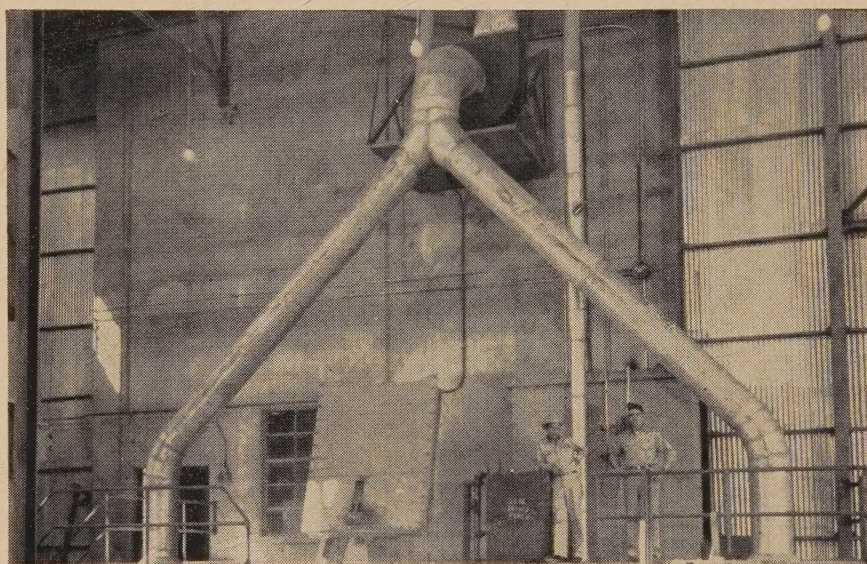
Fewer fires should be everyone's concern, but proper handling of

fires also requires the "know how" for best results. Our inspectors will be glad to assist in this program, but we believe a visual demonstration will do wonders to educate your crew in the shortest space of time.

May we further urge you to make fire prevention, proper handling of fires, proper maintenance and use of first aid fire fighting equipment, a part of your Safety Program. Constant repetition is needed here as in all safety work for satisfactory results.

A questionnaire will be furnished by the Underwriters Grain Assn. on request in any quantity desired.

## CAR DUMPER DUST CONTROL SAVES LOST MAN HOURS



Wiedenmann Car Dumper dust control system for the Producer Grain Corporation's new elevator, Lubbock, Texas.

**B**EFORE installation of this Wiedenmann High Volume Dust Control System, dangerous dust caused daily losses of time and money. Employees without a respirator could work only a very short time on the loading platform. With a respirator employee discomfort and loss of working efficiency cost the company wasted man hours . . . and wasted dollars. TODAY . . . with a Wiedenmann Dust Control System, the air is clear . . . DUST-FREE. Wiedenmann engineers dust control systems for you that reduce insurance premiums, lower housekeeping costs, improve working conditions and prevent dust accidents. TODAY . . . ask us for a free survey to whip your individual dust problem. No obligation, of course.



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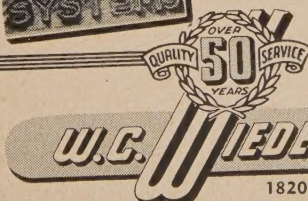
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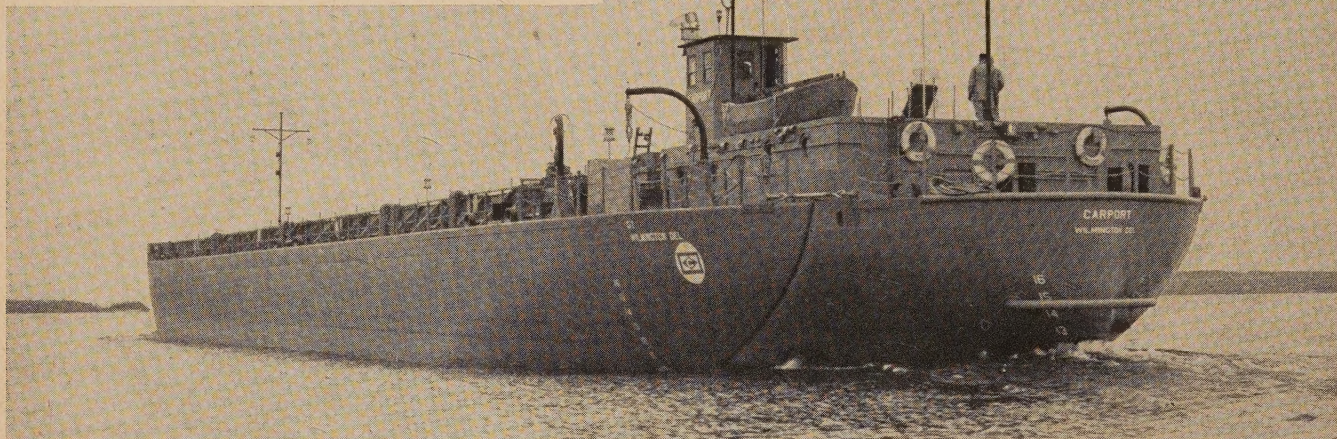
Name and Position \_\_\_\_\_



1820-24 HARRISON STREET • KANSAS CITY 8, MISSOURI



# Grain Barges Are Showing Rapid Progress



Towboat and grain barge of Cargill Carriers, Inc. fit together making practically a single craft.

DOWN at the big grain elevator of Cargill, Inc., on the Calumet River at 122nd St. and Torrence Ave., Chicago, there was tied up a novel craft that attracted city-wide attention. It looked partly like a tug with a long tail and partly like a barge with a high foredeck.

As a matter of fact, the boat was a combination of the two — in other words a towboat and barge which can be fitted together to form a single craft. Looking at it from the side, as will be seen from the illustration above, it appears to be a single craft. The two sections may be uncoupled when desired so they can be used as separate craft.

The 70-ft. diesel powered tug, or tow boat, and the 290-ft. barge are locked together by means of big turnbuckles. The front end of the tow boat fits into an opening in the rear of the barge — an opening that resembles that at the rear of a war time landing craft.

## Towline Eliminated

The arrangement for uniting the two craft provides a tight and rigid coupling. It eliminates the use of a towline. The tight coupling enables the coupled craft to operate either in waterways or in open waters. The tendency of towlines to part in rough water has made it impracticable to operate river type barge tows on the sea or the lakes.

Owner of the new craft is Cargo Carriers, Inc., Cleveland, a sub-

siary of Cargill, Inc. The craft was built in Sturgeon Bay, Wis., by Christy Corporation.

It will be used on the Great Lakes and the New York Barge Canal in ice free months and between New York and San Francisco via the Panama Canal in the winter.

## Tow Boat Is Powerful

The 99-ton tow boat, the *Carport*, is said to be more powerful than many tugs of its size. It has a wheel house that can be raised or lowered hydraulically so that the craft can pass under low bridges on waterways.

The barge section has a capacity of 2,000 tons. Its center hold accommodates grain and other bulk commodities. Around the bulk hold are tanks for liquid cargoes. When the craft took off for Buffalo from the Chicago elevator it carried a full load of corn in the center hold and soybean oil in the tanks.

The development of its barges by Cargill for use on the inland waterways has been watched with a great deal of interest by the entire grain industry. Not only are they increasing in number but the latest types are being used.

In the Illinois River, jumbo type barges are employed with a capacity of 40,000 bus. each. They have interlocking hatch covers that facilitate loading and unloading.

The so-called integrated tow is another modern phase of barge equip-

ment adapted to its use by Cargill. In this there are a bow section, six identical center sections and a motor section. It can be made up in less sections if necessary.

For instance, the integrated tow *Cartasca* which normally runs from St. Paul to St. Louis and from St. Louis to Guntersville, Ala., consists of a bow section, three center sections and a stern section. This outfit has been used as far as New Orleans and also on the Illinois River.

On the New York State Barge Canal integrated tows are operated by Cargo Carriers, Inc., between Oswego and Albany. They have also been used between Buffalo and the New York harbor. Tow capacity for the New York State Barge Canal equipment runs from 2,700 to 3,200 tons, whereas the *Cartasca* on a normal trip carries approximately 4,200 tons of cargo.

## THEY CAN KEEP IT!

Our English cousins pay at least 70 cents for a pack of cigarettes, and pay out almost half of their wages in income taxes. They have Socialism . . . A pack of cigarettes costs \$1.08 in Russia, a loaf of white bread costs 68 cents and butter to spread on it costs \$5 a pound. They have Communism, and . . . (voice from the side-lines: "Brother they can keep it!")



# ON THE SAFETY FRONT

Conducted By  
CLARENCE W. TURNING, SOGES Safety Director

## AN ASTRONOMICAL VIEW OF ACCIDENTS

ONE doesn't have to be an astronomer to quote 1949 accident figures, but some of the totals reach astronomical proportions. Unless we can break those totals down to comprehensible figures, it would be difficult for us to impress our men with their individual importance in the battle of accidents.

For instance, the National Safety Council tells us that there were 91,000 accidental deaths in the United States in 1949. However, it also tells us that 9,000 persons were alive because the previous upward trend in accidents did not continue. If you can convince someone that his life was one of those saved, you have brought accident prevention from the realm of speculation into the every-day world of reality.

Whether this can be done, or should be done — is debatable; but I believe you know of plenty of "near-accidents" on your own property, which could have resulted in a fatality. So you can explain to the men that hazards still remain, and safety is necessary now, and we must think of accident prevention every day in the future. Each "near-accident" is a warning that something is wrong with man, method or machine — which cries out for correction.

In the United States industrial plants, we find there were 13,100 accidental deaths, and 1900 more were killed while operating motor vehicles as a trade or occupation — making a total of 15,000 occupational deaths, from accidents.

This is the segment of the accident problem we have been attacking with indifferent success. Perhaps we should not view the problem through the astronomer's telescope. Perhaps it would help to take a "bird's-eye" view of our industry, or a microscopic close-up of our own plant.

If we had been told 50 years ago that the total cost of accidents in 1949 would be \$7,500,000,000 we would have concluded that someone had mistakenly tacked on three or four ciphers. However, such was the cost — fortunately not in 1910 money — but even in present day wilted lettuce, it is a tremendous sum — enough to pay the cost of running the Federal Government for about a month, at the present rate.

It also convinces us that it is not only increasing income taxes that eat away the money in our pockets. Old

Man Accident is a rat that gnaws away a sizable chunk.

In 20 years, the number of industrial accidents appears to have decreased 9%, based on total population. Our records of the grain industry go back to 1937 — and we can show no improvement in the average frequency rate. Do you won-

der, therefore, that we are asking each superintendent, each foreman, and each workman, to do his level best to promote safety in his plant?

Do not take our unsupported word for these statements, for here is the National Safety Council record on this subject, which shows how we are dragging behind:

Three-year Industrial Frequency and Severity rate; 1947-1949:

|                        | Freq. | Sev. |
|------------------------|-------|------|
| Average all industries | 11.35 | 1.12 |
| Cereal Mfg.            | 4.74  | .56  |
| Corn Products          | 11.77 | 1.74 |
| Milling                | 17.10 | .95  |
| Grain Elevators        | 27.82 | 2.53 |

Are you proud when your ball team climbs from the cellar to 7th place?

## Service records prove it pays to use IMPERIAL BELTS

■ It's not unusual for elevator owners to tell us their Imperial BLACK REXALL LEG BELTS have been in service for 20 years and even longer. Such service records are not surprising, however, when you know how these belts are constructed.

### Compare these Black Rexall specifications with the belts you are using

- 37½-ounce *silver duck*—very highest quality.
- Tensile strength over 700 lb. per inch of width.
- Special inner-locked stitch—no ply separation.
- Impregnated to condition belt for grain leg service.
- No troublesome stretch and reduced slippage.
- Dense weave stops pull-out of bucket bolts.
- Unaffected by vegetable oils—*does not gather static electricity.*



If you want to buy Leg Belts at lowest cost per bushel, write for Data Sheet 48-2

# Imperial BELTING CO.

1756 S. Kilbourn Ave., Chicago 23, Ill.

ENGINEERED BELTING . . . THE RIGHT BELT FOR EACH JOB



If so, perhaps we should cheer the fact, that the United States accidental death rate of 67.1 per 100,000 population, is better than that of Iceland and Egypt! Canada is quite a few notches ahead of the U.S. with a rate of 60.6. The rate for Mexico is not shown.

Let us hammer all we can, on figures quoted for our industries, so that we can drive home the fact that you and I must concentrate on our own problems.

Take the loss by fire for instance: There were 570,000 fires with a money loss of \$714,800,000. Of this sum, 1900 fires and \$25,000,000 represented flour mills and elevators which went up in smoke.

Do you worry about the cost of your safety program and the difficulty of selling management on the value of accident prevention. If so, the following figures will give you a very close estimate of the cost of the kind of accident indicated:

|                      | Insured cost | Uninsured costs | Total costs |
|----------------------|--------------|-----------------|-------------|
| Disabling Injury     | \$401.20     | \$ 68.30        | \$469.50    |
| Requiring Drs. Attn. | 11.00        | 22.80           | 33.80       |
| Requiring 1st Aid    |              | 4.30            | 4.30        |
| "No injury" Accident |              | 149.30          | 149.30      |

The cost of an average disabling injury would probably be a substantial part of your year's safety budget. Eliminating even one accident per year is a very worth-while effort.

Even astronomers are allowed an

## ENTER CONTEST NOW

**Remember this is the right time to enter in the new SOGES Safety Contest. Don't delay, for your plant may win one of the trophies. All that is needed is the \$5 fee sent to the secretary plus the scores for this year. These include the following: Man-hours worked; number of lost-time accidents; details of any serious accidents.**

alibi; when they cannot reach the absolute limits of space with a 100-inch telescope, they ask for a 200-inch instrument — and get it. We can claim an alibi too, but it is not much consolation: Experts now have figures to show that plants employing few men (like most of ours) have much higher frequency rates than large plants:

For instance: Under 25 men—rate 24.8; 25 to 49—rate 22.2; 50 to 99 men, rate 15; 100 to 199 men, rate 21.88; 200 to 499, rate 20.3, 500 and over 11.4.

However, our alibi dries up when we have to concede that our average rates have been higher than any of those figures. It is still our problem. What can we do about it?

Our figures are lifted from "Accident Facts 1950" published by National Safety Council.

## PERFECT YEAR AT NEOSHO

Employees of the Wolf Milling Company of Neosho, Mo., were honored recently for compiling a safety record of 365 days without any lost-time accidents. A certificate of award was presented by F. M. Kercheval, representative of Lumbermens Mutual Casualty Company, to J. N. Karns, manager of the milling company.

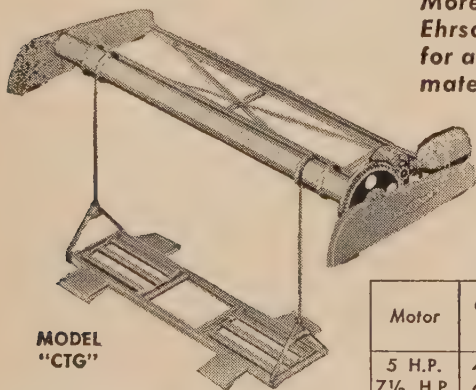
Karns who received the citation in behalf of the company employees, said considerable money has been spent in bettering working conditions and installing new and safer equipment since the plant was established here 5 years ago. The award covered the period from Aug. 31, 1949 to Sept. 1, 1950.

## DANGEROUS MACHINERY

Every now and then one hears a reference to the certain type of machine which is described as "dangerous." Quite likely what is really meant is that, through failure to provide a guard or failure to adjust properly the guards already provided or failure to observe good work practice, injuries have occurred on that

## EHRSAM truck lifts speed up unloading ... safely!

The Ehrsam Model "CTG" lifts more weight than any other lift of the same horsepower. Ehrsam engineering and construction is your guarantee of strength and dependability.



More profits with Ehrsam equipment for all grain and materials handling

MADE IN 3 STANDARD SIZES

| Motor   | Cradle Lift | Cradle Speed Per Minute |
|---------|-------------|-------------------------|
| 5 H.P.  | 4 Tons      | 20 Ft.                  |
| 7½ H.P. | 6 Tons      | 20 Ft.                  |
| 10 H.P. | 8 Tons      | 20 Ft.                  |

ADDRESS INQUIRIES TO DEPARTMENT H

THE J. B. **EHRSAM** & SONS  
MFG. CO.  
ESTABLISHED 1872 ENTERPRISE, KANSAS, U.S.A.

## WHAT IF YOU DO HAVE A MOISTURE TESTER That's No Reason For Not Owning a Better One

Lots of folks once had horses and buggies. But they didn't continue to use them because they had 'em. With the advent of the auto they switched to the speedier, more convenient, more modern method of transportation. Why not switch to a speedier, more accurate, more convenient, more modern Moisture Tester . . . the sensational new

## UNIVERSAL MOISTURE TESTER

The most highly perfected moisture tester ever produced. A REAL time, money and worry saver that is being rapidly adopted by leading concerns all over the country. You'll be money ahead if you DO switch to this more modern tester. It quickly pays for itself with savings effected. And remember, there's NO maintenance cost.

Write today for literature and details of

**LIBERAL FREE TRIAL**



- Gives direct moisture percentage readings. No charts.
- Built-in thermometer automatically takes temperature of sample. No separate temperature tests.
- Consistently accurate.
- Makes complete test in less than a minute on grain, seed, feed and other products.
- Quickly tests frozen, hot or kiln dried samples.
- No electric batteries or outlets required.
- Fully portable. Simple operation.
- Precision-built by Sheldrick. Dependable. No maintenance cost.

**BURROWS EQUIPMENT COMPANY**

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EVANSTON, ILL.



particular machine and we have the old adage of giving a dog a bad name.

It is quite likely that, with many of these machines labelled "dangerous," a close analysis of the injury experience would show that the failures to provide, or to use or to adjust guards were responsible for the label attached to the machine. Supervision takes such machines out of the "doghouse."—*Industrial Accident Prev. Assn. of Ontario.*

## PILLSBURY SETS NEW SAFETY RECORDS

An astounding safety report was recently made by Pillsbury Flour Mills. Two new world records were established by the company's plants at Springfield, Ill. and Buffalo, N. Y. of 2 million work hours each without a single lost time accident.

The Springfield plant employs an average of 1350 persons and has not had a lost time accident since Feb. 24, 1950, R. J. Kerber, plant manager, reported.

The Buffalo plant, which employs an average of 550 persons, has had no lost time accident since May 12, 1949, W. A. Moore, plant manager, stated.

The last world's safety record in the flour milling industry was broken by Pillsbury's Buffalo plant on April 1, 1950, with 1,150,000 hours free of lost time accidents.

Beyond the 4,000,000 work hours without lost time accident at Springfield and Buffalo, Pillsbury mills officials also announced a number of individual plant safety records, the result of operating emphasis on an interplant safety contest.

Among these records are Clinton, Ia., soybean plant, nearly 4 years operation without a lost time accident. Clinton feed plant, nearly 3 years; Colton, Calif., feed plant, over 3 years; Atchison, Kan., flour mill, more than 2 years; Wichita, Kan., elevator, Centerville, Iowa feed and soybean, plant and Astoria, Ore., flour mill, over a year.

## EXTINGUISHERS MUST BE RIGHT

Attacking an elevator head fire with a carbon tet or a carbon dioxide extinguisher is pretty much the same as going after a North Korean tank with a pop gun. It might have some effect, but the chances are it wouldn't do the least bit of good.

Both carbon tet and carbon dioxide types of extinguishers produce a heavier-than-air gas. The extinguishing effect is produced by the gas settling over the burning material and excluding the oxygen of the air which is necessary to support combustion. In the case of an elevator head fire this gas falls away from the fire, hence cannot form a blanket

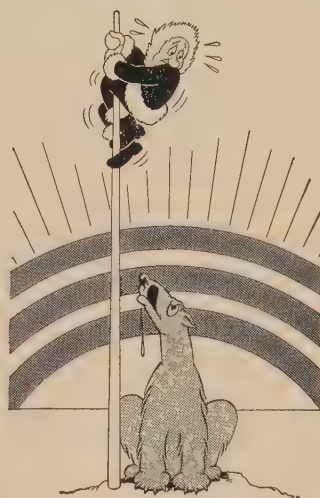
over it. For another thing, such extinguishing method isn't effective on deep-seated fires, which will re-ignite the moment a fresh supply of air is available.

Fire in wood and other ordinary combustible materials can be extinguished only by cooling to below the ignition point with water.

Water barrels and buckets are all right, provided the seat of the flames can be reached. But it is very difficult to reach an overhead fire with water from a bucket. For that reason, the most effective kind of an extinguisher for cupola fires is the pump tank, filled with non-freezing solution. With it an accurate stream can

be directed from the cupola floor against elevator head or roof fires.

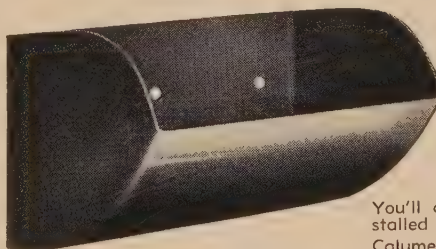
Carbon tet and carbon dioxide extinguishers are designed for fires involving oils, greases and electrical equipment — not for ordinary fires. Don't let anybody tell you differently. Just examine the label on the extinguisher if you want to know the kind of fire on which it will be effective. If it says "Approved for Class A fires," that means fires in wood and other ordinary materials. Class B fires are those involving oils and greases. Class C are electrical fires. Don't expect any kind of an extinguisher to be effective on any kind of a fire; they just aren't. — *Our Paper.*



## THE Only PLACE YOU Won't FIND THE CALUMET CUP

... is where they have no earthly use for an elevator bucket of **any kind.**

But pack your bag and travel to any spot on the face of the globe where grain is grown and stored, and you'll find the popular choice is the world famed



Weller Pat.  
No. 1944932

## CALUMET SUPER CAPACITY ELEVATOR CUP

You'll discover that more Calumet Cups have been installed than any other make on the market.

Calumet did not win the overwhelming preference of elevator operators everywhere because it is a trim, streamlined good-looker. It became and will remain the prime favorite because of its proven superiority... its super capacity and efficiency... its unbeatable economy.

## "IT'S THE CURVE THAT Counts"

The patented Logarithmic Curve design of the Calumet has never been successfully imitated. The performance of the Calumet has never been duplicated.

Yes, it's "The Curve That Counts" ... and counts big in smoother, more economical operation... in increased profits.

**Ask Your Jobber**

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## GIVE YOU TOP QUALITY VALUE

If you want enduring, properly constructed complete elevator legs, heads, boots and elevator legging... screw conveyor troughs... bins and sheet metal work to specifications... buy Biwelco.

The Biwelco seal on any metal product assures you of the best possible buy.

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## B. I. WELLER CO.

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37 Years Of Service To The Grain Trade





SOME OF THE MERRY THROUG AT CHICAGO SOGES CHAPTER ALLIED SMOKER

Top Row: John Deheer, Columbia Malting Co.; Lloyd Forsell, Albert Schwill & Co.; Augie Seron, Columbia Malting Co.; Harry Hanson, The Glidden Co.; Parke Burrows, Burrows Equipment Co.; Bill Appleman, Burrows Equipment Co.; "Slim" Carlson, Underwriters Grain Assn.; Doug. McKay, Chicago Board of Trade; Mark Kaplan, Boston Woven Hose and Rubber Co.

Bottom Row: National Secy. Dean M. Clark, Chicago; John N. Hall, Chicago and Paul Naehar, B. F. Gump Co., Chicago; Sidney I. Cole, Industrial Erectors Co., Chicago; Richard Miller, "American Miller and Processor," Chicago; Russell B. Maas, Screw Conveyor Corp., Hammond.

THE smoker of the Chicago Chapter of SOGES, held in the bungalow atop the Morrison Hotel on Saturday evening, December 9th was one of the nicest social gatherings of the Society in a long time.

It all began with getting into the party through a "Dog House" entrance door about 3 feet high, which meant that everyone had to "stoop a little" in order to enter.

Once inside, each committee took over guests in turn in a well-organized manner. The attendance committee furnished each guest with a name plate, which they called "snifter cards" and on which was pictured three dogs, the second following the first and the third following the second. All guests were called on to sign a large sheet that would probably hold the names of all expected guests.

With the ink hardly dry on the registration sheet, the Reception Committee took over and introduced guests to everyone within reach but before the guest had a chance to wonder what to do next, he was taken in hand by a member of the Refreshment Committee and with more introductions, in no time at all the evening was well under way and the Food Committee came into action and Dinner was served. The dinner was very well-prepared and the food was excellent.

After dinner, the party was given no opportunity to drag because the Entertainment Committee had its plans all ready to amuse the guests. Frank E. "Slim" Carlson took over as Master of Ceremonies and as his

## Lively Party Staged by Chicago Associates

stories began to follow one after the other, it became apparent that he could really "tell 'em."

This led to a "free for all" from the guests and story telling turned into a contest. Prizes were given for the "tallest" tales but since they all told such "wonderful" stories, everyone received a suitable memento for outstanding accomplishment.

As guests arrived and as they moved about the lovely apartment, Parke W. Burrows, of Burrows Equipment Co., Evanston, was entertaining the guests with his Polaroid camera, which took black and white photographs. These most excellent pictures, which are developed inside the camera and handed to guests in a matter of a minute, were entirely a courtesy on the part of Mr. Burrows and every one was very appreciative.

The main event of the entertainment committee was the "Magic in the Grain Trade" by Hon. W. Douglas McKay of Glasgow and the guests never knew a dull moment.

Doug McKay had his audience completely perplexed with his card tricks and he even went so far as to explain in great detail to several in the front rows, just how it was done but something always went wrong.

Sidney I. Cole followed the magician, with some of his famous recitations and his audience kept laughing long after the story was finished. Later on when the small hours began turning, four or five tables of cards were set up and bridge, canasta, and other games got under way.

Following are the names of members to whom appreciation is due for a very well organized evening of pleasure and for a very fine party: General Chairman, Irwin Cohen, Arco Bag Co., Chicago; General Co-Chairman, Edward P. Escher, Screw Conveyor Corp., Hammond.

### Attendance Committee

Russell Maas, Chairman, Screw Conveyor Corp., Hammond; E. W. Bishop, Structural Waterproofing Co., Chicago; Bryce Hess, The Hess Co., Chicago; Mark Kaplan, Boston Woven Hose & Rubber, Chicago; Arthur Keenan, U. S. Rubber, Chicago; S. C. Klaus, Zeleny Thermometer Co., Chicago; Jas. Macdonald, Macdonald Eng. Co., Chicago; Irving Evins, Adair Sup. & Chem. Co., Chicago.

### Refreshment Committee

Fred Melberg, Chairman, W. D. Allen Mfg. Co., Chicago; Wm. Hamilton, Richardson Scale Co., Chicago; Al. Lundquist, Innis-Speiden & Co., Chicago; Harry Press, Pullman Sheet



Metal Works, Chicago; Harry Zimmer, Bonded Exterminators, Chicago; Ralph Wilson, Chicago; F. N. Leishmann, W. C. Wiedenmann & Son, Kansas City, Mo.; Walter McNaughton, W. D. Allen Mfg. Co., Chicago; David Swan, Sprout, Waldron & Co., Chicago.

#### Program Committee

Frank Vytlačil, Chairman, The Day Co., Chicago; Joel Dickinson, Imperial Belting Co., Chicago; Albert Hazle Jr., B. F. Gump Co., Chicago; Ben Linderman, Arco Bag Co., Chicago; Rex Yocum, Seedburo Equipment Co., Chicago; H. G. Onstad, Burlington, Wis.

#### Reception Committee

W. R. Appleman, Chairman, Burrows Equipment Co., Evanston; Bruce Harrison, Industrial Erectors, Inc., Chicago; Roy Faleide, J. B. Ehram & Sons, Chicago; Rudy Skala, R. J. Skala Co., Chicago; Roy Harfst, Seedburo Equipment, Chicago; W. Kittlesen, K. I. Willis, Moline; Ira Willis, Superior Separator, Hopkins, Minn.; Fred Adams, Imperial Belting, Chicago.

#### Food Committee

Ed. Escher, Screw Conveyor Corp., Hammond, Ind., Chairman; Ted Badenoch, S. S. Howes Co., Chicago; Charles Harbin, Underwriters Grain Assn., Chicago; Harry Edwards, B. I. Weller Co., Chicago; John Gullledge, B. F. Goodrich Co., Chicago; John Cmar, Great Lakes Supply Co., Chicago; Wm. Kerr, Hewitt-Robins, Inc., Chicago; Wilhelm Melchior, Consultant, Chicago.

#### Entertainment Committee

Sid Cole, Chairman, Industrial Erectors, Chicago; Chas. Harbin and (Slim) Carlson, Underwriters Grain Assn., Chicago; Parke Burrows, Burrows Equipment Co., Evanston, Ill.; Lloyd Burmeister, Milwaukee; S. A. Johnson, James Stewart Co., Chicago.

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COMPLETE ELEVATING AND CONVEYING SYSTEMS

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Chicago; F. Neil Leishman, W. C. Wiedenmann & Son, Inc., Kansas City, Mo.; Ben R. Linderman, Arco Bag Company, Chicago; Russell B. Maas, Screw Conveyor Corporation, Hammond, Ind.; Fred T. Melberg, W. D. Allen Mfg. Co., Chicago; Harry R. Press, Pullman Sheet Metal Works, Chicago; David P. Swan, Sprout, Waldron & Co., Chicago; Frank F. Vytlačil, The Day Company, Chicago; Ira S. Willis, Superior Separator Company,

Hopkins, Minn.; Ralph Wilson, Ralph Wilson & Associates, Chicago; Harry L. Zimmer, Bonded Exterminators, Chicago.

Great men suffer hours of depression through introspection and self-doubt. That is why they are great. That is why you will find modesty and humility the characteristics of such men.—Bruce Barton.

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for the

## 22nd Annual Convention Society of Grain Elevator Superintendents

APRIL 18 - APRIL 21, 1951

**Hotel Statler---Buffalo, N. Y.**

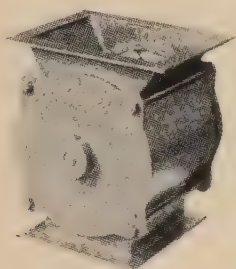
Write Richard J. Hewitt, Hotel Statler, Buffalo 2, N. Y.



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**ELIMINATE BACK  
PRESSURE ON  
COLLECTOR**

**PREVENTS  
CONTAMINATION  
OF PRODUCT**

**PROVIDES FOR EVEN  
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**PREVENTS EXCESSIVE  
AIR LOSS**

**REDUCES DUST  
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| Feed Mills      | Collectors |
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Allows complete product removal with a minimum of air loss.

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### HONOR ROLL

*Standing of members who have secured new SOGES members since the last convention. If YOUR name isn't on the list try to put it there by next month.*

|                                   |    |
|-----------------------------------|----|
| Lee McGlasson, Seattle            | 7  |
| John Mack, Buffalo                | 5  |
| James Auld, Minneapolis           | 4  |
| R. K. Krebbs, Kansas City         | 4  |
| John J. Kitching, Buffalo         | 3  |
| E. A. Christie, Cedar Rapids      | 2  |
| O. E. Christiansen, Seattle       | 2  |
| Paul Christensen, Minneapolis     | 2  |
| Charles Delzell, Kansas City      | 2  |
| Felix Schwandner, Champaign, Ill. | 2  |
| Ward Stanley, Kansas City         | 2  |
| Ralph Yantzi, Kansas City         | 2  |
| Vincent Blum, Omaha               | 1  |
| Sid Cole, Chicago                 | 1  |
| Claude Darbe, Kansas City         | 1  |
| J. W. Dickinson, Chicago          | 1  |
| B. E. Friel, Kansas City          | 1  |
| Wm. Gassler, Chicago              | 1  |
| John Gullede, Chicago             | 1  |
| Charles Harbin, Chicago           | 1  |
| Richard Harfst, Chicago           | 1  |
| Lewis Inks, Akron, Ohio           | 1  |
| Clifford MacIver, Minneapolis     | 1  |
| Henry Onstad, Burlington, Wis.    | 1  |
| Art Osgood, Minneapolis           | 1  |
| Russell Paarlberg, Hammond, Ind.  | 1  |
| E. J. Raether, Minneapolis        | 1  |
| Wm. Weatherly, Galveston          | 1  |
| Charles Winters, New Orleans      | 1  |
| Total                             | 54 |

### SOGES CHAPTERS AND DATES

1st TUESDAY—Minnesota SOGES Chapter. Robert (Bob) Ranney, Ralston Purina Co., Minneapolis, President; Ray Bakke, Pillsbury Mills, Minneapolis, Vice-President; James Auld, Hales & Hunter Co., St. Louis Park, Secretary.

2nd TUESDAY — Omaha-Council Bluffs SOGES Chapter. Vincent Blum, Omaha Elevator Co., President; W. S. Pool, Nebraska-Iowa Elevator, Omaha, Vice-President; Frank Guinane, Interstate Grain Corporation, Council Bluffs, Secretary.

2nd FRIDAY — Central States SOGES Chapter. M. M. Darling, The Glidden Co., Indianapolis, President.

3rd TUESDAY — Kansas City SOGES Chapter. Andy J. Olson, Cargill, Inc., Kansas City, Mo., President; Robert T. Congrove, Standard Milling Co., Kansas City, Mo., First Vice-Pres.; L. C. Smith, Machinery & Supply Co., Kansas City, Mo., Second Vice-Pres.; R. K. Krebbs, Norris Grain Co., Kansas City, Mo., Secretary-Treasurer.

3rd TUESDAY and 1st MONDAY,

# DON'T LET



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**FOR  
EFFECTIVE  
DUST AND GAS  
PROTECTION**

### ROBERTSON Explosion Ventilators

#### WILL

Remove the more explosive fine dust from the leg by continuous gravity action

#### WILL

Release pent-up gases and flames in case of an explosion

#### WILL

Minimize the possibility of a secondary explosion by continuously venting gases

### ROBERTSON Ventilation Engineers

#### WILL

Inspect your elevator and recommend proper sizes and number of ventilators to secure maximum protection at minimum expense.

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alternately — Chicago SOGES Chapter. Harry Hanson, Glidden Co., Chicago, President; Dale E. Wilson, Northwestern Malt & Grain Co., Chicago, Vice-President; Russell Paarlberg, Farm Bureau Milling Co., Hammond, Ind., Secretary.

3rd THURSDAY—Buffalo SOGES Chapter. Cornelius Halsted, General Mills, Inc., Buffalo, President; James Burns, Pillsbury Mills, Inc., Buffalo, Secretary.

QUARTERLY—Pacific Northwest Chapter. Lee McGlasson, Fisher Flouring Mills, Seattle, Wash., President; George Watson, Crown Mills, Portland, Ore., First Vice-President; Verne Erickson, General Mills, Inc., Spokane, Wash., Second Vice-President; O. E. Christensen, Albers Milling Co., Seattle, Secretary.

## Plants and People

### GEORGE NOXON RESIGNS

Because he has been in poor health for some time, George A. Noxon, Mgr., Production Staff Dept., Ralston Purina Co., St. Louis recently resigned.

### GTA STORAGE GROWS

Grain Terminal Assn.'s terminal grain storage capacity reached 19 million bus. with completion during December of a 5.7 million bu. addition to the Co-op's Head of the Great Lakes elevator at Superior, Wis., Pres. M. W. Thatcher said in his annual report. This huge elevator can now store 11.5 million bushels of grain.

### NEW GM SOYBEAN PLANT

General Mills will build a new soybean processing plant, grain elevator and oil refinery at Rossford, Ohio. Capacity of the solvent extraction plant will be 12,000 bushels of soybeans daily, according to Whitney H. Eastman, president of General Mills' Chemical Division. Storage facilities will accommodate 1½ million bus. The oil refining unit will refine the entire crude oil output of the plant.

The processing plant will be built on company-owned property adjacent to General Mills' Larro Formula Feed plant at Rossford. It will supply part of the company's requirements for soybean oil meal, used in the

manufacture of formula feeds. Plans call for operation of the plant in time for the 1951 soybean harvest.

### DALE WILSON ADVANCED

W. M. Hales, Gen. Mgr., Hales & Hunter Co., announces that Dale E. Wilson has been appointed plant superintendent of the company's malt processing plant, 4600 W. Cortland St., Chicago. Mr. Wilson was previously elevator superintendent and will continue to direct the elevator operations in addition to his new duties. He is also vice-president of the Chicago SOGES Chapter.

### NEVER TOO BUSY

Paul Blodget of Faultless Milling Co., Springfield, Ill., reports having "sampled" a generous portion of that commodity he's always heard so much about but never had experienced before, namely, "Southern Hospitality."

It seems Paul, a past active officer of the Chicago SOGES Chapter, returned from a Florida vacation via New Orleans and naturally visited past national president Charles J. Winters of the Public Grain Elevator there — 1950 SOGES convention city.

With 18 boats waiting to be loaded,

a 7-day a week 24-hour-a-day working schedule, topped off by an embargo because of the vast accumulation of loaded cars awaiting unloading, Charlie Winters and SOGES Honorary Member Dick Swenson of the Board of Commissioners saw to it that Paul and his wife were royally entertained even if by proxy, all during their several-day stay.

"We're never too busy to arrange for our friends to get to see historic New Orleans — the busiest grain export market in the country, and the Capital city of the Deep South — of which we're so proud," they told Paul.

Winters and Swenson have built quite a grateful alumni and alumnae among their many visitors, all of whom have reveled in that Good Ol' Southern Hospitality.

### QUAKER OATS BUYS CAT FOOD FIRM

Entrance into the cat food business by the purchase of the Coast Fishing Co., Wilmington, Calif., has been announced by the Quaker Oats Co. Officials emphasized the fact that cat food is a logical teammate with dog food which is now being produced in Quaker plants at Rockford, Ill., Marion, Ohio, and Ogden, Utah.

The Coast Fishing Co. it is re-



**IT'S BEST FOR GREATER CAPACITY**

Bigger Fill—Less Spill—Perfect Pick-up and Discharge. The HIGH LIP picks up a full load and the HIGH ENDS and WIDE BOTTOM retain it. The bucket has the correct design to empty at the right moment. The shape of the bottom conforms to the top, permitting better spacing on belt—no loss-gaps. Its construction means longer life on the job. Note how sturdy "Nu-Hys" are built—welded with wide flanges to insure strength. Let us show you how to achieve highest potential capacity and efficiency without expensive re-building or enlarging of legs. Write for form No. 76—no obligation. Let us analyze your problem.

IN CANADA—Manufactured and sold under license by Sullivan Mill Equipment, Ltd., 637 Davenport Road, Toronto, Ontario

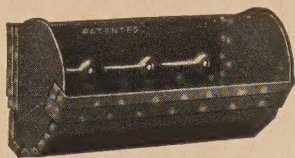
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**THE FACT STILL  
REMAINS  
THAT  
SUPERIOR ELEVATOR  
CUPS**

**ARE  
MADE STRONGER  
WILL  
LAST LONGER  
HAVE  
GREATER CAPACITY**

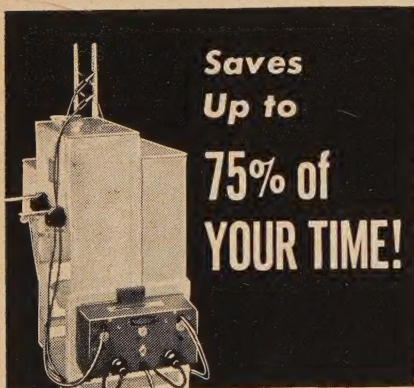
and will operate more efficiently  
at less cost than other elevator cups.

**"DP" - "OK"  
"CC" - "V"**

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CORPORATION  
MOLINE, ILLINOIS**

for names of distributors  
and analysis form No. 20



**Saves  
Up to  
75% of  
YOUR TIME!**

Yes, the new, All-Electric Cut-off Control for the Brown-Duvel Moisture Tester saves as much as 75% of your time. Further, it makes the Brown-Duvel Tester faster, easier to operate and more accurate. You can stop worrying about inaccuracies from under-heating or thermometer breakage from over-heating. Just plug this All-Electric Cut-off into any wall plug—no batteries needed. It can be hooked up in a jiffy to any Brown-Duvel Tester.

Price—2 compartment tester ..... \$69.90

**All Types of Testers**

You can obtain the Brown-Duvel Tester that meets your exact needs from Seedburo, largest supplier to the seed and grain trade in America. The precision-built Brown-Duvel is available in two, four or six-compartment units, with or without an automatic shut-off . . . Send for prices today.

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## BETTER BRUSHES FOR EVERY USE!



**STAR**

**Warehouse Push Broom**

This is the broom that is used by most large terminal elevators for sweeping grain out of box cars.

### Quality Separator Brushes



We can furnish highest quality separator brushes for any machine.

**WRITE TODAY FOR  
FURTHER INFORMATION**

**FLOUR CITY BRUSH COMPANY** MINNEAPOLIS 15, MINN.

ported has assets in excess of \$4 million. Between 75 and 80% of its business is in cat food. The acquisition of this concern now gives Quaker Oats a total of 19 plants it is operating in the United States.

### NEW ORLEANS PUBLIC ELEVATOR NOW HANDLES TRUCKS

For the first time, trucks can now unload grain at the Public Grain Elevator of New Orleans, reports Chas. J. Winters, Supt. "We installed the facilities at the request of soybean shippers," he says. "However, any type of grain arriving by truck can now be unloaded."

For the present, trucks will unload at pits used also for rail unloadings. If the service proves to be successful and to meet a real need, permanent special arrangement will be made.

### OUT-OF-TOWN VISITORS

Harry Erickson, Lauhoff Grain Co., Danville, Ill.

Ira Willis, Superior Separator Co., Hopkins, Minn.

Walter Myers, Schneider, Ind.

William A. Tyler, Borden Soybean Products Co., Kankakee, Ill.

Edwin Josephson, Schreier Malting Co., Sheboygan, Wis.

William Ehrsam, J. B. Ehrsam & Sons Mfg. Co., Kansas City, Mo.

R. K. Yancey, J. B. Ehrsam & Sons Mfg. Co., Enterprise, Kans.

Neil Leishman, W. C. Wiedenmann & Sons, Inc., Kansas City, Mo.

Clifford W. Swalin, Supt., Farmers Grain Dealers Assn., Des Moines, Iowa.

### INDUSTRY UNITS CERTIFIED "EXCELLENTLY MANAGED"

General Mills, Inc., Minneapolis, and The Quaker Oats Company, Chicago, are among 238 firms throughout the United States and Canada which are being awarded "Certificates of Management Excellence" for the year 1950 by the American Institute of Management, New York. The awards, which will be bestowed annually hereafter by the Institute, are based on its continuing study of more than 2,000

leading concerns — designed to provide a base for research into corporate policies and procedures.

In weighing the merits of each management, Mr. Martindell explained, credits are given for excellence in ten separate fields — economic function, corporate structure, health of earnings growth, fairness to stockholders, research and development, directorate analysis, fiscal policies, production efficiency, sales vigor and executive evaluation.

### Blast-Fire Razes Elevator

Minneapolis — The Midland Elevator, owned by the Archer-Daniels-Midland Co., was destroyed by explosion and fire Nov. 29. Three men were injured. The explosion, occurring at 2 p.m., was followed by fire that was extinguished by firemen at 4 p.m., and the sprinkler system was turned off. But at 6 p.m. the blaze had rekindled.

The 50-year-old frame structure was one of a group of four elevators of the Delmar plant. It contained about 20,000 bus. of flax.

### IN THE HOPPER

Jim: "Yep, the engagement is off; she won't marry me."

Joe: "Did you tell her about your rich uncle?"

Jim: "Yeah. Now she's my aunt."

Woman (to conductor): "A full fare for me and half-fare for my little boy."

Conductor: "But he's got long pants on."

Woman: "In that case, a full fare fare for the boy and half-fare for me."

There was a young lady of Munich  
Whose appetite was unich;

"There's nothing like food,"

She contentedly cooed,

As she let out three tucks in her tunich.

Speaker: "I have lived in this town all my life. By actual count there are fifty-five tap rooms and saloons in the town, and I am proud to say I have never been in one of them."

Voice: "Which one is that?"

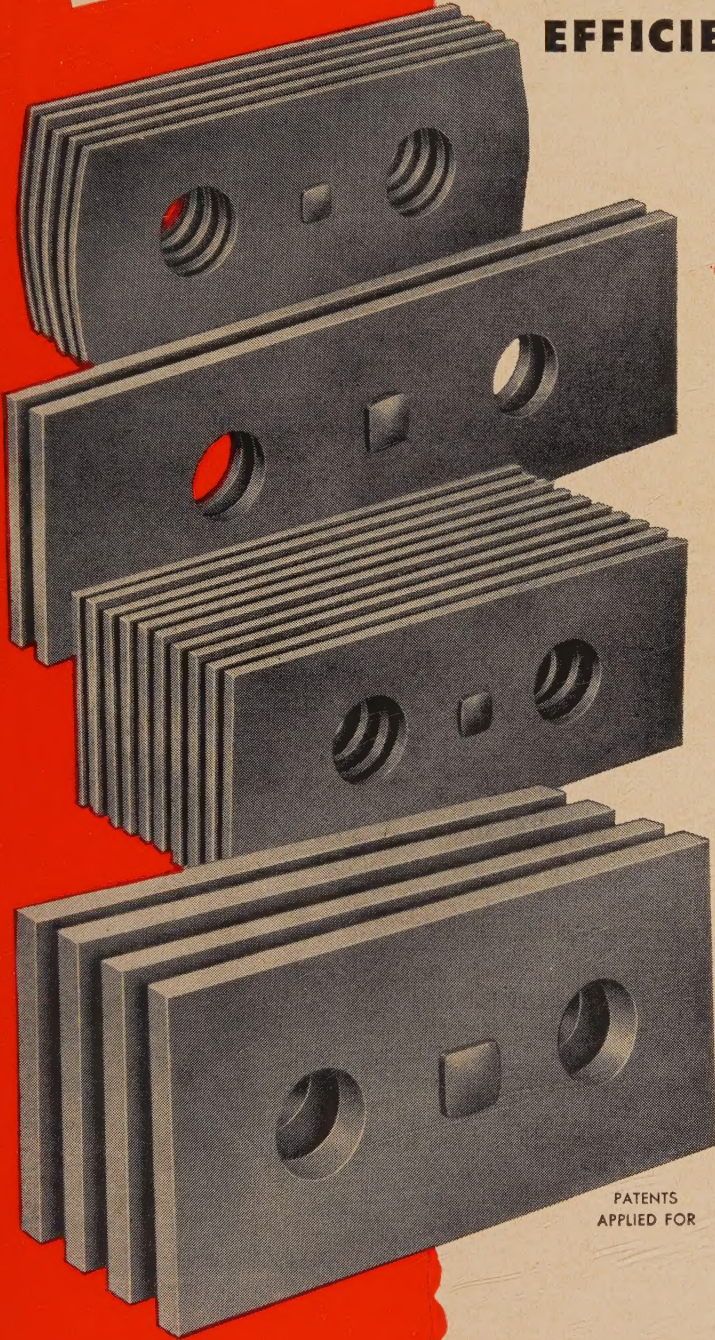


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# PACAL HAMMER CLUSTERS

**INCREASE YOUR HAMMERMILL EFFICIENCY**

*4ways*



PATENTS  
APPLIED FOR

- ✓ **NO REBUSHING**
- ✓ **NO NEED TO REGROUP HAMMERS**
- ✓ **MAXIMUM EFFICIENCY  
DUE TO POSITIVE SPACING  
OF CUTTING AREAS**
- ✓ **NO HAMMER BALANCING**

Save time, save money with the new PACAL hammer clusters. They come completely assembled and ready for installation.

It is not necessary to remove, rebush or rebalance the new PACAL hammer clusters. They retain their balance during the life of the hammers. All four hammer corners can be used effectively by turning the cluster end for end in the mill.

Save money in grinding costs, save money in replacement costs. Use PACAL hammers which have a tested life 4 to 5 times greater than others.

Illustrated are only a few of the many types of clusters available. Let us analyze your hammer requirements and install a new type cluster that will give you the maximum efficiency from your hammermill. For complete information, write to the PACAL HAMMER DEPARTMENT.

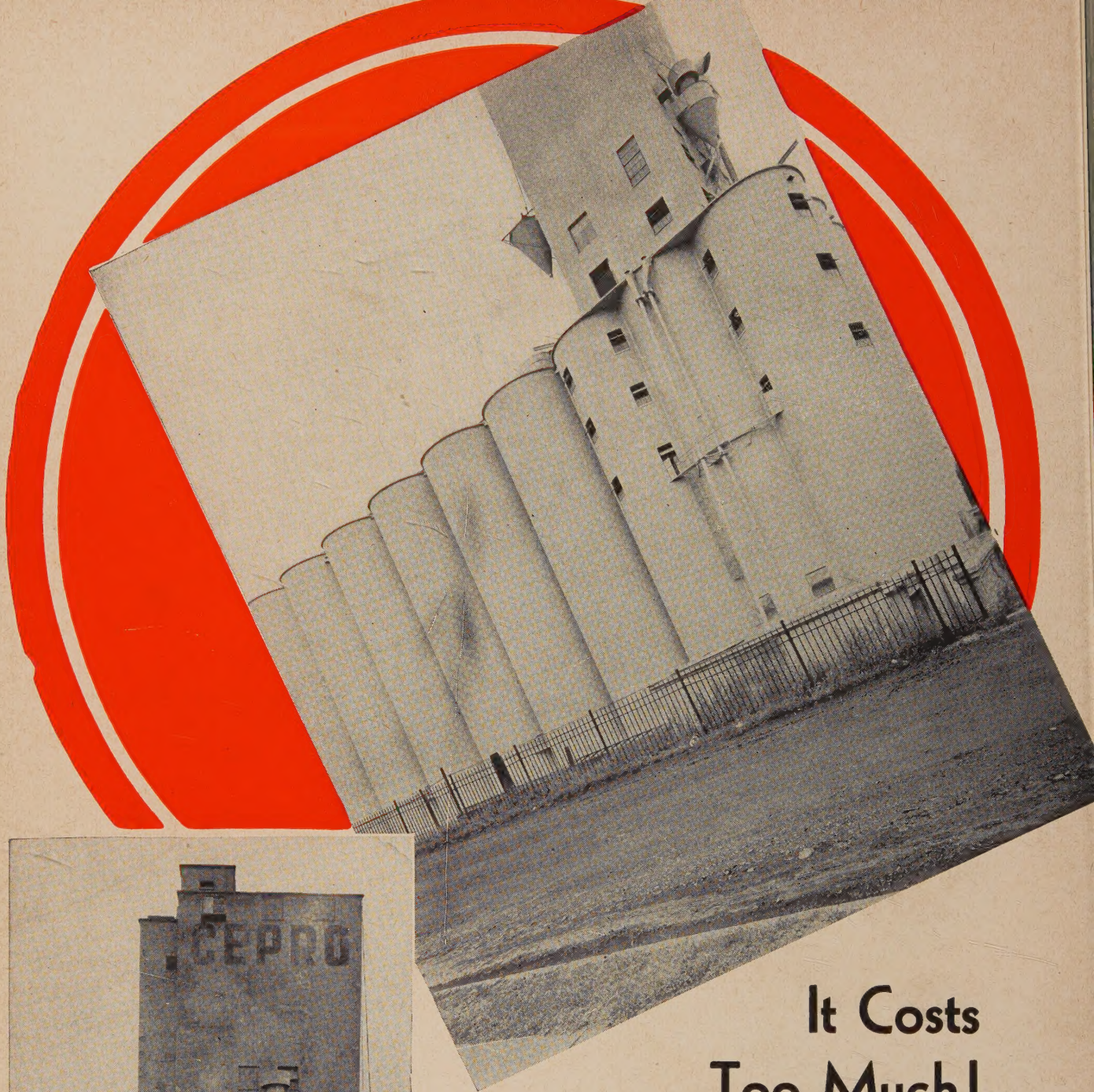
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Every Day The Elements Are Gnawing Away at Your Properties, Eating Up and Tearing Down Your "House Of Cards." Why Not Protect Yourself As Best You Can By Consulting With . . .

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